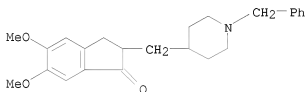


ANSWER 1 OF 1 REGISTRY COPYRIGHT 2010 ACS on STN  
 RN 120011-70-3 REGISTRY  
 ED Entered STN: 07 Apr 1989  
 CN 1H-Inden-1-one, 2,3-dihydro-5,6-dimethoxy-2-[[1-(phenylmethyl)-4-piperidinyl]methyl]-, hydrochloride (1:1) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1H-Inden-1-one, 2,3-dihydro-5,6-dimethoxy-2-[[1-(phenylmethyl)-4-piperidinyl]methyl]-, hydrochloride (9CI)  
 OTHER NAMES:  
 CN Aricept  
 CN Aricept D  
 CN BNAG  
 CN Donepezil hydrochloride  
 CN E 2020  
 CN E 2020 (pharmaceutical)  
 DR 142057-77-0  
 MF C24 H29 N O3 . Cl H  
 CI COM  
 SR CA  
 LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CIN, CSCHEM, EMBASE, HSDB\*, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK\*, PATDPASPC, PIRA, PROMT, PROUSDDR, PS, RTECS\*, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 CRN (120014-06-4)



● HCl

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

557 REFERENCES IN FILE CA (1907 TO DATE)  
 19 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 563 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his 15-17

(FILE 'CAPLUS' ENTERED AT 09:32:05 ON 07 JUN 2010)

L5 563 S L2  
 L6 56 S L2 AND CRYSTAL?  
 L7 2 S L6 AND (METHYLENE(5A)CHLORIDE)

FILE 'REGISTRY' ENTERED AT 09:34:50 ON 07 JUN 2010

FILE 'CAPLUS' ENTERED AT 09:34:50 ON 07 JUN 2010

=> d bib abs hit 1-2

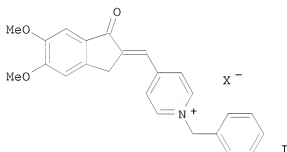
L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2010 ACS on STN  
AN 2009:1204112 CAPLUS  
DN 151:403120  
TI Preparation of donepezil hydrochloride  
IN Rao, Dharmaraj Ramachandra; Kankan, Rajendra Narayanrao  
PA Cipla Limited, UK; Patht, Snnivas Laxminarayan; Curtis, Philip Anthony  
SO PCT Int. Appl., 29pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|----|---------------|--|----------|-----------------|----------|
| PI | WO 2009118516 | A1   | 20091001 | WO 2009-GB776   | 20090324 |
|    | W:            | AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW |          |                 |          |
|    | RW:           | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM   |          |                 |          |

PRAI IN 2008-MU636 A 20080325

OS CASREACT 151:403120

GI



AB The present invention provides a process for preparing donepezil or a salt, the process comprising reducing a 1-benzyl-4-[(5,6-dimethoxy-1-indanon-2-yl)methylenel]pyridonium halide (I, X = Br or Cl), in the presence of an ionic compound, a solvent, a catalyst and a source of hydrogen, to form donepezil and optionally converting the donepezil to the salt.

IT Crystallization

Drug delivery systems

Hydrogenation

Hydrogenation catalysts

Reduction

(preparation of donepezil hydrochloride)

IT 60-29-7, Diethyl ether, uses 64-17-5, Ethanol, uses 64-19-7, Acetic

acid, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 75-09-2, Methylene chloride, uses 77-92-9, Citric acid, uses 107-06-2, Ethylene chloride, uses 108-20-3, Diisopropyl ether 109-99-9, Thf, uses 127-08-2, Potassium acetate 127-09-3, Sodium acetate 141-78-6, Ethyl acetate, uses 585-29-5, Triethylammonium formate 631-61-8, Ammonium acetate 1336-21-6, Ammonium hydroxide 1634-04-4, tert-Butyl methyl ether 7447-40-7, Potassium chloride, uses 7601-89-0, Sodium perchlorate 7632-50-0, Ammonium citrate 7647-14-5, Sodium chloride, uses 7778-49-6, Potassium citrate 10103-46-5, Calcium phosphate 12125-02-9, Ammonium chloride, uses 14265-44-2, Phosphate, uses 14307-43-8, Ammonium tartrate 15066-28-1, Pyridinium formate 16068-46-5, Potassium phosphate RL: NUU (Other use, unclassified); USES (Uses) (preparation of donepezil hydrochloride)

IT 120011-70-3P, Donepezil hydrochloride RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of donepezil hydrochloride)

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2010 ACS on STN  
 AN 2005:1292008 CAPLUS  
 DN 144:27610  
 TI Preparation of polymorphs of donepezil hydrochloride  
 IN Aher, Umesh P.; Tarur, Venkatasubramanian R.; Sathe, Dhananjay Govind; Naidu, Avinash Venkataraman; Sawant, Kamlesh Digambar  
 PA USV Limited, India  
 SO U.S. Pat. Appl. Publ., 7 pp., Cont.-in-part of U.S. Ser. No. 72,169.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 6

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | US 20050272775  | A1   | 20051208 | US 2005-145202  | 20050603 |
|      | US 7186842  | B2   | 20070306 |                 |          |
|      | US 6649765  | B1   | 20031118 | US 2003-365717  | 20030212 |
|      | US 20040158070  | A1   | 20040812 | US 2003-714724  | 20031117 |
|      | US 6953856  | B2   | 20051011 |                 |          |
|      | US 20050107613  | A1   | 20050519 | US 2004-879816  | 20040629 |
|      | US 7439365  | B2   | 20081021 |                 |          |
|      | WO 2006011154   | A1   | 20060202 | WO 2004-IN227   | 20040728 |
|      | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
|      | RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  |      |          |                 |          |
| EP   | 1771416   | A1   | 20070411 | EP 2004-806738  | 20040728 |
|      | R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LT, LV   |      |          |                 |          |
| IN   | 20050288330   | A1   | 20051229 | US 2005-72169   | 20050304 |
| US   | 2006MN00197   | A    | 20080905 | IN 2006-MN197   | 20060216 |
| US   | 20080076928   | A1   | 20080327 | US 2006-412294  | 20060427 |
| US   | 20070123565   | A1   | 20070531 | US 2006-557764  | 20061108 |
| PRAI | US 2003-365717  | A2   | 20030212 |                 |          |
|      | US 2003-714724  | A2   | 20031117 |                 |          |

|                 |    |          |
|-----------------|----|----------|
| US 2004-879816  | A2 | 20040629 |
| WO 2004-IN227   | A  | 20040728 |
| US 2005-72169   | A2 | 20050304 |
| US 2005-145202  | A2 | 20050603 |
| US 2005-752640P | P  | 20051221 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention discloses a novel, stable polymorph of 1-benzyl-4[(5,6-dimethoxy-1-indanone)-2-yl]methylpiperidine-HCl (donepezil-HCl) (I). Further the present invention discloses a process for producing amorphous I and its polymorphic Form VI. Thus, I was prepared by the reaction of the free base with oxalic acid followed by treatment with HCl.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Crystal structure  
(of donepezil polymorph)

IT Alzheimer's disease  
Polymorphism (crystal)  
Solvents

IT 67-66-3, Chloroform, uses 75-09-2, Methylene chloride  
, uses 108-88-3, Toluene, uses 141-78-6, Ethyl acetate, uses  
RL: NUU (Other use, unclassified); USES (Uses)

(preparation of polymorphs of donepezil hydrochloride)

IT 120011-70-3, Donepezil hydrochloride

RL: PRP (Properties)  
(preparation of polymorphs of donepezil hydrochloride)